THE JOURNAL

OF

POLITICAL ECONOMY

MARCH—1897

GREENBACKS AND THE COST OF THE CIVIL WAR.[1]

UPON the soundness of its money the prosperity of the industrial interests of any community is intimately dependent. If the money be an inconvenient circulating medium, all exchanging is hampered. If it be an unstable denominator of values and standard of deferred payments, all economic relations are rendered needlessly uncertain. Every member of the community is interested in securing a currency free, so far as is possible, from these faults. The satisfaction of this common need has been very naturally regarded as one of the proper objects of collective action, like the maintenance of order, and the administration of justice. Consequently, from early times, the fixing of the standard of value, and the coinage of money have been among the ordinary functions of government.

Government, however, has not always performed these functions in a satisfactory manner. When the king made the money used by his subjects he naturally concluded that the money belonged to him. And if the currency of his realm was his property, it was his right to do what he would with his own. Consequently, as far back as monetary records go, we find governments by their practice denying that the currency is a device for facilitating the operations of industrial life, and using it instead as a source of gain to themselves who have the monopoly

[1] This paper is one chapter of a study on the history of the United States notes, 1862–1879.

of making it. It has been by no means uncommon for a prince who lacked funds or wished to scale his debts to put a less weight of gold or silver, or a larger proportion of alloy, into the standard money which he coined. The deleterious effects of such a policy have been but too apparent perhaps in every country of Europe.[1]

Unfortunately such operations did not cease with the Middle Ages, where they seem, perhaps, not out of harmony with the current political ideas. In the nineteenth century more than one government has attempted to make a fiscal use of its privilege of coining money. The methods employed to this end are, to be sure, different from those in vogue in the fourteenth century. A modern government does not lessen the amount of gold in its coin; it makes money out of paper and declares it to be a legal tender in payment of debts—a more efficient means of depreciating the currency and accomplishing substantially the same results.

It might seem as if the evil effects of tampering with the currency were so obvious that at the present time no one would defend such practices except as a last resort when all other resources had been tried and found wanting. And yet this ancient policy in its modern form has not lacked defenders in our own time and country. A theory is current in the United States, claiming as its sponsor Thomas Jefferson, that in case of war the government should always use its privilege of coining money as a means of gaining revenue. A suspension of specie payments and the issue of the notes of the government to serve as money is held to be the natural and proper policy for the financial management of a war.[2]

[1] *Cf.*, on this whole subject, ORESME'S famous *Tractatus de Origine, Natura, Jure, et Mutationibus Monetarum.* Reprinted in appendix of W. CUNNINGHAM'S *Growth of English Industry and Commerce during the Early and Middle Ages* (first edition, Cambridge, 1890), pp. 556–579; also by M. L. WOLOWSKI, *Traité de la première invention des monnaies* (Paris, 1864).

[2] See Jefferson's letter to J. W. Eppes giving his plan for the financial management of the war of 1812. *Works*, vol. vi. pp. 136–142. E. G. Spaulding prints a quotation from this letter on the title-page of his *History of the Legal-Tender Paper Money issued during the Great Rebellion* (Buffalo, 1869). The convention of the

The men who managed the finances of the federal government during the Civil War seem to have been thoroughly indoctrinated with this theory. At all events, the policy which it prescribes was scrupulously carried out. Specie payments were suspended, and legal-tender notes were issued. We have in this recent experience, then, an excellent opportunity of studying the results of the modern method of making the privilege of furnishing a currency for the transaction of the business affairs of the community into a machine for raising revenue.

The wisdom of this policy should be considered from two points of view: first, from that of the financial interest of the government; second, from that of the economic and ethical interests of the nation. The field for discussion is thus very wide. But one aspect of it can be considered in the present paper. The effects of the issue of inconvertible paper money in disarranging the industrial organization of the country, in stimulating a spirit of reckless speculation, in breeding habits of extravagance in the people, in lowering the tone of business morality, in lessening the real wages of labor, in fact, all the questions that arise from the second point of view must be left for consideration in another place. At present the subject will be studied solely from the first point of view, that of the fiscal interests of the government.

Immediately upon the bombardment of Fort Sumter, April 12, 1861, President Lincoln issued a proclamation calling for 75,000 troops, and convening Congress in extra session. This made it the duty of the secretary of the treasury, Mr. Salmon P. Chase of Ohio, to formulate definitely his financial policy at the very commencement of the war. The plan which he laid before Congress in July 1861 proposed to raise a revenue from taxes sufficient to pay the ordinary expenses of the government on a peace footing, and the interest on the public debt. All the war

greenback party in 1876 likewise appealed to Jefferson in support of their views. See their platform in *National Platforms of all Political Parties* (ed. T. H. McKee), p. 101.

expenditures proper were to be met by the proceeds of loans. No war taxes were proposed.[1] With the report, the secretary submitted several bills embodying his recommendations. Upon these Congress hastened to put the stamp of legislative approval. The government was thus committed to the dangerous policy of relying upon borrowing to furnish the financial means for waging war.[2]

Under the authority conferred upon him by Congress the secretary immediately set to work to secure loans.[3] Borrowing abroad was out of the question. To obtain money at home from a popular subscription would require time, and the need was immediate. Moreover, recent loans had not been well received, and just now several of the states were in the market trying to borrow money.[4] In this dilemma Chase appealed to the banks of the three chief commercial cities, New York, Boston, and Philadelphia. They responded most patriotically. A plan was arranged between their representatives and the secretary, whereby the associated banks agreed to advance 50 millions to the treasury immediately. In return they were to receive at their par value the same amount of treasury notes running three years and bearing 7.30 per cent. interest. The banks likewise were given an option of taking a second 50 millions of the notes on the same terms the 15th of October, and a third 50 millions the 15th of December.[5]

The banks which thus undertook to lend the government 150 million dollars in four months' time had an aggregate capital of but 119.7 millions. Although they were unusually strong in specie at the time the agreement was made, their total reserves

[1] *Senate Executive and Miscellaneous Documents No. 2*, XXXVII Congress, first session.

[2] Chase's Loan Bill was passed by the house after a debate of one hour which was entirely occupied by Mr. Vallandigham. The vote was 150 to 5. (*Congressional Globe*, XXXVII Congress, first session, p. 61.) Even less time was given to it in the senate (*ibid.*, pp. 109 and 127).

[3] See text of the act in 12 *Statutes at Large*, 259.

[4] *Appleton's Annual Cyclopædia*, 1861, pp. 297 and 307–308.

[5] For text of this agreement see *Bankers' Magazine* (New York), vol. xvi. pp. 162, 163.

amounted only to 63.1 millions.[1] This sum would hardly more than pay the first installment of the loan. To prevent its being exhausted at the very beginning it was necessary that the banks should be able to replace very rapidly the specie which they paid to the government. They counted on doing this in two ways. First, they would sell the securities received from the government to the public for cash. It was part of the agreement that the treasury should help in this by opening public subscriptions to the loan in all parts of the country. Second, the specie given to the government would be speedily paid out again in disbursements for its immense purchases of war supplies. The coin would thus be restored to the channels of trade, and naturally flow into the banks again.

If the banks could collect specie in these two ways as rapidly as they paid it out to the government, they could continue indefinitely to supply the treasury with funds. But the moment that there occurred even a brief delay in the return of specie to the banks trouble would come. The reserves would be depleted by the drafts of the treasury, and suspension would be inevitable. Such a delay would happen if anything should occur to make the public afraid to buy the 7.30 treasury notes from the banks, or to interrupt the government's payments of specie out of the subtreasury, or to prevent men from depositing in the banks the coin received from the government. The situation, both of the banks and of the treasury, was thus very precarious. The plan might work admirably in fair weather, but in the first storm it was likely to collapse. Chase, however, seems to have been blissfully ignorant that danger lurked in the scheme.

At the very outset the banks met an unforeseen obstacle. The independent subtreasury system required all dues to the United States to be paid in coin to the treasury.[2] This would have compelled the banks to send the specie lent to the government to

[1] See the tables showing the condition of the banks of New York, Boston, and Philadelphia during the year 1861, in *Appleton's Annual Cyclopædia*, 1861, pp. 63-65.

[2] Act of July 4, 1840, § 19. — 5 *Statutes at Large*, 385.

the subtreasuries, there to be shut off from the needs of commerce until it came out again in payments to creditors. But an act had been passed by Congress with the special intent of removing this difficulty.[1] The law of August 5, 1861, relaxed the rigor of the subtreasury system so far as to permit the secretary "to deposit any of the moneys obtained on any of the loans . . . . in such solvent specie-paying banks as he might select."[2] Under this law the banks expected that the loan to the government would be managed in the same manner as a loan to a private person; they would credit the United States with a deposit of 50 millions upon their books, against which the secretary of the treasury could draw as he had occasion. Chase, however, placed a different construction upon the act, denying that it authorized him to leave the government's money with the banks. He therefore insisted that the loan be paid in specie into the vaults of the subtreasury. Much against their will the banks complied.[3]

But though this demand weakened the position of the banks, all went well for a time. During the first month the reserves were decreased, but not to a serious extent. Afterward the loss was partially recovered. The first installment of 50 millions was paid successfully, and the banks agreed to take the second on the 1st of October, fifteen days earlier than the time fixed upon. There was but one ominous sign. The popular subscription had not been a marked success. But 45 millions of the treasury notes of the first installment had been sold to the country, and of the second installment the sale was so slow that the public subscription offices were closed, and the banks undertook to dispose of the securities which they received by themselves.[4] Nevertheless they agreed to anticipate the third installment by a month,

[1] See the remarks of Senator W. P. Fessenden upon the object of this act.—*Congressional Globe*, XXXVII Congress, first session, p. 396.

[2] 12 *Statutes at Large*, 313.

[3] Chase's reasons for his action are given in a letter to Trowbridge; see R. B. WARDEN, *An Account of the Private Life and Publiç Services of S. P. Chase* (Cincinnati, 1874), pp. 386–388. With this compare the letter of G. S. Coe to Spaulding (Appendix to second edition of SPAULDING'S *History*, pp. 91, 92). The latter letter gives the side of the banks.

[4] See Chase's letter referred to above.—WARDEN, pp. 386–388.

taking it November 16. This time, however, they would take no more 7.30 treasury notes, but instead received 6 per cent. bonds at a rate equivalent to par for 7.30 notes.[1]

Although the outlook to bankers seemed threatening, nothing serious happened up to the middle of December. The annual report of Secretary Chase contained no hint or suspicion of coming danger. Although the banks could sell their securities but slowly, they collected specie from the business community as rapidly as they paid it to the government. December 14th the reserves were very nearly as high as they had been at any time since August.[2] About this time, however, two untoward events occurred. The first was the report of the secretary of the treasury. It had been generally felt that the plan of borrowing from banks to carry on the war could be only a temporary makeshift intended to serve until a permanent policy could be matured. It was hoped that the finance report in December would present a programme of adequate taxation. The disappointment over its failure to do so was keen, and the suspicion that the secretary was not equal to his great task injured the credit of the government.[3] The second event was the Trent affair which threatened for a time to involve the federal government in a war with England.

The moral effect of these events was immediately seen. The credit of the government declined so that it became impossible for the banks to sell the government securities, which they held to a large amount, except at a great pecuniary sacrifice. This cut off one source from which they had been obtaining specie. At the same time people being frightened stopped depositing money in the banks, and this cut off the other source. Even worse, the deposits began to be withdrawn and the specie reserve dwindled at an appalling rate.[4] About 27

[1] This rate is 89.32463831. For the 50 million dollars of 6 per cent. bonds the treasury therefore received $45,795,478.48. See *Executive Document No. 25*, p. 129, XXXVII Congress, third session.

[2] See the table in note, p. 124 below.

[3] *Cf.* BLAINE, *Twenty Years in Congress* (Norwich, Conn., 1884), vol. i. p. 407.

[4] The following table shows the variations of the aggregate specie reserves of the

millions in specie were drawn inland from the New York banks in the month of December, by far the larger part of it in the last two weeks.[1] It was all outgo now, and no income. The end was but a question of time. After standing the strain upon their reserves for two weeks, the New York banks were compelled, in order to save themselves from complete exhaustion, to suspend specie payments on the thirtieth day of December. Banks in other cities speedily followed suit.[2] The suspension of the national treasury was entailed as a necessary consequence of the suspension of the banks. Thus the first day of the new year 1862 saw the collapse of the whole scheme of national finance. Chase's plan had been proven insufficient in less than six months from the time it was formulated.

The treasury had now reached a crisis. The secretary was at a loss what to do. While he was still considering, one of the members of the ways and means committee of the house of representatives brought in a bill authorizing the issue of legal-tender paper money. After some hesitation Chase acceded to the plan, and the first legal-tender act was passed in February 1862. The first step being taken, the second and third followed quickly. Within a year from the enactment of the first law, a

banks of New York, Boston, and Philadelphia, from the time of the first agreement with the government until a few days after the suspension:

1861	Million	1861	Million
Aug. 17	$63.15	Nov. 2	$57.05
24	60.32	9	55.43
31	57.69	16	56.01
Sept. 7	54.56	23	56.59
14	49.23	30	56.64
21	no data	Dec. 7	58.02
28	48.55	14	56.46
Oct. 5	51.59	21	53.15
12	54.22	28	43.85
19	55.85	1862	
26	56.04	Jan. 4	38.59

(Compiled from tables of the official returns in *Appleton's Annual Cyclopædia*, 1861, pp. 63–65. The reserve for January 4, 1862, is from similar tables in *Hunt's Merchants' Magazine*, vol. xlvii. pp. 378–379.)

[1] See table of movements of specie to and from New York, *Appleton's Annual Cyclopædia*, 1861, p. 304.

[2] *Hunt's Merchants' Magazine*, vol. xlvi. pp. 101–102.

total issue of 450 million dollars of United States notes had been authorized. This was the currency that later came to be popularly called the "greenbacks."

The legal-tender acts led to a substitution of paper for a specie circulation.[1] The new money had no value in use. Melt a gold dollar and the bullion was still worth approximately 100 cents. But if a paper dollar were burned, there was nothing left but ashes. The value of the new currency was therefore as strictly a derivative value as the value attached to the note of a private individual. So long as the financial credit of the government stood high, the discount upon its notes was small. But as it continued to put out additional issues of its notes, to contract an enormous debt, and to wage a war of apparently doubtful issue, the value of its notes depreciated for the same reason that the notes of a corporation whose affairs were in dubious condition would depreciate. This depreciation, slight at first, increased steadily, with favorable reactions when federal victories seemed to promise an early end to the war. The maximum monthly average was reached in July 1864, when a dollar note sold for 38.7 cents in gold.[2] After that month the value of the greenbacks gradually rose, under the stimulus of military success, until a month after the surrender of Lee a dollar in currency was worth nearly 74 cents in gold.

When the greenbacks became the sole circulating medium of the country, the prices of all articles were necessarily quoted in terms of the paper currency, as before they had been expressed in terms of specie. As the value which the members of the community placed upon the paper currency declined, it took

[1] The dates of the legal-tender acts were February 25, 1862 (12 *Statutes at Large*, 345); July 11, 1862 (12 *Statutes at Large*, 532); March 3, 1863 (12 *Statutes at Large*, 710). Each act authorized an issue of 150 million dollars in United States notes.

[2] See the treasury table of the value of currency in gold, *Finance, Commerce, and Immigration of the United States*, No. 4, Series 1895–6, p. 518. The lowest ebb in the value of the notes was on the 11th of July, when a dollar note brought only 35 cents in gold. The premium on gold that day touched 285. See table of daily highest and lowest prices of gold in the New York market, in *New York Commercial and Financial Chronicle*, vol. i. p. 169.

more of the poorer dollars to purchase the same amount of commodities. When a man was selling groceries, the less valuable a note of the United States seemed to him, the more of these notes he would ask for his goods. Thus the depreciation of these greenbacks brought about a very sudden and a very great rise of prices. This rise is succinctly shown in Professor Falkner's price tables. Taking prices in 1860 as equal to 100, the average price level was 100.6 in 1861. By the beginning of 1862 it had risen to 117.8. Then the effects of the depreciated currency began to be fully felt, and the rise became more rapid. In 1863 prices were 148.6, in 1864, 190.5, and in 1865 the maximum of 216.8 was reached.[1] Prices had more than doubled in four years.

This depreciation of the monetary unit of the country which served as the standard of value is the significant fact in the history of the greenback currency. From the depreciation followed many consequences of momentous importance to the community. At present, however, we are concerned with but one of these results, the effect of the depreciation upon the cost of the war to the taxpayers of the country. If the depreciation made any difference in that cost, this difference must appear in the amount of the public debt which the nation owed at the close of the struggle. For, if the use of a depreciated paper currency made the expenses of waging war less, it decreased the amount of money which the government had to borrow, and therefore left the country with a debt smaller than would otherwise have been the case. On the other hand, if the currency increased the cost of the war, it added to the sums which had to be borrowed and therefore created a larger debt. Thus the financial advantage or disadvantage of the use of the greenbacks is to be seen in the amount of the debt incurred. By considering whether the debt was increased or decreased, we can ascertain the loss or gain by the use of this currency. The problem may be stated more exactly in this form: By how much was the

[1] *Wholesale prices, wages, and transportation* (LII Congress, second session, *Senate Report, No. 1394*, part i, p. 91).

sum which the nation owed at the close of the war greater or less than the sum which it probably would have owed had no legal-tender paper currency been issued, that is, had the specie standard of value been maintained?

A bit of analysis will provide a method by which this problem may be attacked. Had the war been conducted on a specie basis the debt contracted would have been equivalent to the total excess of the current expenditures[1] expressed in terms of a specie dollar over the ordinary receipts of the treasury likewise expressed in terms of a specie dollar. Now the use of a paper dollar which had a value considerably less than that of a gold dollar artificially increased the nominal amount of all sums expressed in terms of it, in the same way that the use of a foot shorter than twelve inches would nominally increase the length of every article measured by it. Therefore the amount both of expenditures and of income was increased by the issue of paper over what these sums would have been on a specie basis. The public debt actually contracted was equal to the excess of the annual expenditures, increased as they were by the depreciation, over the annual receipts similarly increased. Comparing this equation with the former one it appears that the effect of the depreciation upon the amount of the debt is measured by the increase of expenditures minus the increase of revenues.[2] There

[1] Including all payments except those upon the principal of the public debt. When the government, as was the case during the Civil War, created a new debt to pay an old one, the total amount of money owed was not altered. See, however, below, p. 134 *et seq.*

[2] A mathematical formulation may make this more clear:

Let D = the debt that would have been contracted on a specie basis.
R = the revenues expressed in specie.
E = the expenditures expressed in specie.

Then we obtain as equation (1),

$$D = E - R.$$

Now let D' = debt contracted on the paper basis.
iR = increase in the revenues by use of paper dollar.
iE = increase of expenditures through same cause.

This gives us equation (2),

$$D' = (E + iE) - (R + iR).$$

will therefore be three steps necessary to discover the increase or decrease of debt due to the issue of the greenbacks. (1) An estimate of the increase of expenditures caused by the depreciation must be made. (2) The like increase of revenue must be found. (3) The difference between these two sums will give the desired result. If, after this calculation has been made, the increase of revenues be found to exceed the increase of expenses, the conclusion will be that the debt incurred on account of the war was less by reason of the use of the paper currency. In this case the legal-tender acts must be considered a success from the financial point of view. If, however, the result is the other way,—the increase of expenditures being greater than the increase of receipts,—the reverse conclusion must be drawn.

I. THE INCREASE OF EXPENDITURES.

When prices rose in consequence of the depreciation of the currency, the government, like any other purchaser, was compelled to pay more paper money for the supplies which it bought. The following table gives some examples of this increase in necessary expenditures. It shows the progressive rise in the prices which the navy department was compelled to pay to obtain food and clothing for its sailors.

In considering this increase of expenditure, the first question to be settled is in what manner the addition made by the depreciation to the prices which the government had to pay can be most accurately ascertained. Two methods suggest themselves. It may be assumed that the increase was in proportion (1) to the rise in the average price level, as shown by the senate report, or (2) to the decline in the gold value of the paper.

Subtracting equation (1) from equation (2),

$$(2)\quad D' = E + iE - R - iR.$$
$$(1)\quad D = E \qquad - R.$$
$$(3)\quad D' - D = iE \qquad - iR.$$

That is, the change in the amount of the debt due to the depreciation of the currency is equal to the increase in expenditures due to the depreciation minus the like increase in revenues.

TABLE I.

PRICES PAID BY THE FEDERAL GOVERNMENT FOR FOOD AND CLOTHING FOR THE YEARS 1861 TO 1865.

Name of article	1861	1862		1863		1864		1865	
		Price	Per cent.	Price	Per cent.	Price	Per cent.	Price	Per cent.
FOOD.									
Beans ....per bushel	$ 1.49	$ 2.24	150	$ 3.15	211	$ 3.22	216		
Beef, fresh .... " pound	.0647	.0540	83	.075	116	.1132	175	$ .139	215
Coffee............ " "	.1295	.2490	192	.3148	243	.4425	342		
Molasses.......... " gallon	.34	.3450	101	.59	174	1.19	350		
Sugar........per 100 pounds	6.17	8.99	146	13.22	214	23.50	381		
Tea..............per pound	.3898	.5890	151	.8195	210	1.1875	305		
Vegetables, fresh.. " "	.0197	.0135	68	.015	76	.0123	62	.026	132
CLOTHING.									
Blue cloth trowsers " pair	3.08	3.37	109	4.88	158	5.92	192	9.33	303
" flannel overshirts...each	1.45	1.615	111	2.975	205	3.15	211	4.19	289
Canvas duck trowsers.per pair	.99	1.07	108	1.74	176	1.98	200	3.57	361
Canvas duck........ " yard	.28	.3370	120	.55	196	.59	211		
Blue nankeen....... " "	.05	.05	100	.28	560	.255	510	.394	788
Blankets...............each	1.77	2.37	134	3.60	203	4.15	234	5.88	332
Calfskin laced shoes..per pair	1.28	1.42	111	2.20	172	2.13	166	2.57	201
Kipskin shoes....... " "	1.31	1.48	113	2.14	163	2.18	166	2.54	194
Woolen socks .... " "	.27	.2975	110	.3725	138	.549	203	.617	229
Mattresses, two covers...each	4.45	4.60	103	9.15	206	11.57	260		
Blue felt pea jackets..... "	10.00	10.00	100					22.97	230
Average.........			117		201		246		298

NOTE: The above are the contract prices which the government paid for the articles enumerated. Taken from reports of the naval bureau of provisions and clothing. See *Reports of the Secretary of the Navy*, 1861, p. 501; 1862, p. 892; 1863, p. 1049; 1864, p. 1172; 1865, part ii, p. 381.

To the first standard there is a serious objection. The price level is the resultant of forces affecting the supply and demand both of commodities and of paper. Our concern, however, is with the rise of prices only so far as it was due to the depreciation of the paper. There is no certainty that the rise of the price level was due solely to this cause. Indeed, it is reasonably certain that such was not the case. The war necessarily increased the demand for some commodities and decreased the demand for others. At the same time it interfered with the supply of many staple products. Because of the increased

demand for lead, for example, its price was very much increased. The supply of the southern staples, cotton, tar and turpentine, molasses, sugar, and rice was partly cut off and their prices raised in consequence.[1] Every one of these were articles which the government required for its soldiers and sailors. Their prices would doubtless have risen considerably even had the war been conducted without a suspension of specie payments. To use an average price level in which these and other articles similarly affected were included would be to charge to the depreciation of the currency an increase of price due to causes entirely independent of the issue of paper money. The first standard would therefore not represent accurately the increase which the greenbacks brought about in the cost of the war.[2]

With the second standard also—the depreciation of currency as measured in gold—some trouble may be found. After the suspension of specie payments and the issue of paper money a part of the ordinary demand was taken from gold. It was no longer used as money. It was legally required only for payment of customs duties to the government, and for payment of the interest on the public debt. This lessening of the demand had a tendency to lower the value of gold. But the effect of this tendency was probably not great. The monetary demand of a single nation for a few years is not an item sufficient to seriously change the value of gold fixed as it is in a world market.

[1] The following table from the senate report shows how the prices of the articles named were raised above the average price level.

	1864	1865
Average level of prices,	190.5	216.8
Lead, drop shot,	....	340.4
Cotton,	....	1090.9
Molasses, New Orleans,	....	283.0
Sugar, granulated,	....	285.0
Rice,	....	282.4
Tar,	720	....
Turpentine,	900	....

See respectively pp. 91, 40, 37, 33, 35, 34, and 48 of Part I of the report.

[2] It is worth noticing, however, that the rise of prices which the government paid, as shown in Table I, was more rapid than the rise of general wholesale prices as shown by Dr. Falkner's figures.

It seems fair, then, to conclude that the depreciation of the paper money in relation to gold gives a better basis than does the rise of prices in currency for estimating what prices the government would have had to pay for commodities upon a specie basis. At any rate the gold standard is the more conservative. This fact is established by the following comparison between the rise of commodities and of gold in terms of the paper currency.[1]

Years	Value of commodities in paper	Value of gold in paper
1860	100.0	100.
1861	100.6	100.
1862	117.8	102.5
1863	148.6	145.1
1864	190.5	155.5
1865	216.8	216.2

According to this table, commodities during the war were higher than gold, the value of both being expressed in terms of the paper currency. Therefore, if it be assumed that the prices which the government paid for commodities were as high above what would have been paid on a specie basis as the level of market prices in currency during the war was above what the price level had been in 1860 and 1861, the increase of government expenditures will appear greater than if the rise is assumed to have been in proportion to the fall in the gold value of the paper. In adopting the latter standard, then, we shall err, if at all, on the safe side.

On this basis is made the following estimate of the amount by which the expenditures of the government were increased by the depreciation of the greenbacks. The first section of the table gives an itemized account of the current expenditures of

[1] The value of commodities in terms of paper is Dr. Falkner's average price of all articles (*Senate Report*, part i, p. 91). The value of gold in paper is the average premium for January of each year (from the treasury table referred to above, p. 125). The January price of gold is taken because Falkner's prices of commodities are from quotations for the month of January, with a few exceptions (see *Report*, part i, p. 29). In making out the table of gold prices from that of currency prices Falkner uses the January premium on gold instead of the average for the whole year (*Report*, part i, p. 99).

TABLE II.

INCREASE IN THE EXPENDITURES OF THE FEDERAL GOVERNMENT CAUSED BY THE DEPRECIATION OF THE CURRENCY, 1862 TO 1866.

	Fiscal year 1862 (6 mos.)	Fiscal year 1863	Fiscal year 1864	Fiscal year 1865	Fiscal year 1866 (2 mos.)
I. Current expenditures.[1]	Million	Million	Million	Million	Million
For war	$197.2	$599.3	$690.8	$1,031.3	$118.5
For navy	21.3	63.2	85.7	122.6	7.2
For Indians	1.1	3.1	2.5	3.8	.5
For pensions	.5	1.1	5.0	10.5	2.6
For miscellaneous objects	10.7	23.3	27.5	44.8	6.8
For interest on the public debt	6.6	24.7	53.7	77.4	22.2
	237.4	714.7	865.2	1,290.4	157.8
II. Expenditures not increased by the depreciation.					
For pay of the army[2]	48.4	188.2	227.1	308.7	107.6
For pay of the navy[3]	4.8	13.9	25.2	28.8	1.6
For salaries of the civil list[4]	2.9	6.4	8.1	10.8	2.0
For expenses of foreign intercourse	.6	1.2	1.3	1.3	.2
For Indians	1.1	3.1	2.5	3.8	.5
For pensions	.5	1.1	5.0	10.5	2.6
For interest on the public debt	6.6	24.7	53.7	77.4	22.2
	64.9	238.6	322.9	441.3	136.7
III. Expenditures increased by depreciation (I minus II)	172.5	476.1	542.3	849.1	21.1
IV. Average value of $100 of currency in gold[5]	96.9	72.9	64.0	49.5	70.1
V. Gold value of the expenditures increased by depreciation	167.2	347.1	347.1	420.3	14.8
VI. Amount by which depreciation increased expenditures	5.3	129.0	195.2	428.8	6.3
Add the increase in the pay of the army	....	....	7.1	57.9	20.1
VII. Total sum by which expenditures were increased by the depreciation	....	....	....	....	849.7

NOTES TO TABLE II.

[1] As given in the annual statements of the register of the treasury. See *Finance Reports*, 1862, pp. 37–42; 1863, pp. 34–40; 1864, pp. 33–39; 1865, pp. 44–49; 1866, pp. 32–37. For 1862 one-half of the expenditures are taken, and for 1866 one-sixth.

[2] Taken from the annual reports of the paymaster-general. Includes payments to the regular army, to volunteers, and to the Military Academy. See for 1862, *Executive Document No. 1*, p. 43 (XXXVII Congress, third session, vol. iv); for 1863, *Executive*

Document No. 1, p. 73 (XXXVIII Congress, first session, vol. v); for 1864, *Executive Document No. 83*, p. 100 (XXXVIII Congress, second session, vol. xiv); for 1865 *Executive Document No. 1*, part ii, p. 898 (XXXIX Congress, first session, vol. iii) After May 1, 1864, three-sixteenths of the pay reported is added in section vi to the increase of expenditures caused by depreciation, because the Act of June 20, 1864 (taking effect May 1), increased the pay of private soldiers from $13 to $16 per month (13 *Statutes at Large*, 144). The report of the paymaster-general for 1865 states the amount paid to the army between June 30 and October 31, 1865, as 215.3 million dollars. For the two months of the fiscal year 1866 I have taken half this sum, having no means of making a closer approximation. The sum paid in these two months was five-twelfths of the total payments for the year. So, in stating the total expenditures of the war department for July and August 1866 I have taken five-twelfths of the expenditures of the year. All other items of expenditure for 1866 are one-sixth of the whole expenses of the year. The reports of the register give no data for making a more exact calculation.

[3] Amount drawn from the treasury by requisitions for pay of the navy, including the marine corps, as reported each year by the second comptroller of the treasury. See for 1862 *Report of the Secretary of the Navy*, p. 921; for 1863, *ibid.*, p. 1094; for 1864, *Executive Document No. 12* (XXXVIII Congress, second session); for 1865, *Executive Document No. 8* (XXXIX Congress, first session); for 1866, *Executive Document No. 315*, pp. 270 and 276 (XL Congress, second session).

[4] The expenditures for the civil list and for foreign intercourse are usually included among the miscellaneous expenses. See statements of the register of the treasury already cited.

[5] From the treasury table of the average value of $100 in gold in the New York market. See *Finance, Commerce, and Immigration of the United States*, No. 4, Series 1895–6, p. 518. For 1862 I have taken the average value for the months January to June 1862; for 1866, of the months July and August 1865; for the other years the figures are those given as the average value for the respective fiscal years.

the United States for the latter half of the fiscal year 1862, for 1863, 1864, 1865, and the first two months of 1866. These limits are determined by the facts that the depreciation of the currency began January 1862, and the public debt reached its maximum amount August 31, 1865.[1] The propriety of these limits for an estimate of the whole amount by which the public debt was increased by the depreciation is evident.

Of these items of expenditure some were increased by the depreciation of the currency, and some were not. In the latter class fall most of the expenses for labor. Thus the pay of the soldiers was fixed by statute, and therefore could not be changed except by a new statute. Until May 1, 1864, the pay of the

[1] *Report of the Secretary of the Treasury*, 1866, p. 6.

rank and file of the army remained what it had been when it was made in specie. On that date, however, the wages of private soldiers was increased from $13 to $16 per month. The table shows what the pay of the army would have been upon a specie basis, that is, the actual pay, making allowance for this increase after May 1, 1864.

Other items of expenditure unaffected by the depreciation were the pay of the navy, the salaries of the officials on the civil list, pensions, and the expenses of foreign intercourse. The payments to the Indians consisted partly of money, partly of commodities. The cost of the latter portion was of course increased by the rise of prices. To make sure of being on the safe side, however, the Indian disbursements are here included among the expenditures not increased by the depreciation.

Another item in the same class was the expenditure for interest. If the war had been conducted on a specie basis taxes would have been levied and the interest on the public debt both paid in coin. When it passed to the paper basis the government expressly provided that the paper money should not be a legal tender for the interest on its debt. To obtain coin for this single purpose, customs duties were required to be paid in gold. Under this arrangement the issue of paper money made no difference with the item of interest directly. The same number of dollars had to be raised under the paper régime, and in the same medium, that would have been required on a specie basis, and no more.[1]

Since our object is to ascertain the increase of public debt due to the depreciation of the currency, the expenditures made in payment of the principal of the debt itself are excluded from the table. When the government contracted new loans to pay old debts that had matured, the increase and decrease would offset each other, provided the government could borrow at par.

[1] Indirectly, however, the use of paper money did affect the interest charge in two ways. (1) The issues of United States notes constituted a loan without interest, and thus saved the interest upon a certain amount of borrowed money. (2) On the other hand, the use of the paper money increased the sums that the government had to borrow, and therefore increased the interest charge. See below pp. 141–142.

Of the debts that matured and were discharged during the war, a part were paid in gold and a part in paper.[1] Paper the government could most of the time borrow at par, or even a small premium. But for gold a large premium had to be paid. However, the customs receipts considerably exceeded each year the interest charge, and thus gave the government a certain amount of gold to meet other coin obligations. This made it necessary to purchase but little specie, so that the increase of debt on this account may be safely neglected.

All of these items of expenditure unaffected by the depreciation of the currency are grouped together in the second section of the table. By subtracting their sum from the total expenditures we obtain the amount of expenditures that were increased by the use of the greenbacks. This is given in the third section of the table. To find what these expenditures would probably have amounted to on a specie basis, their gold value is obtained by multiplying the amount for each year by the average value of the greenbacks in gold (section V). The difference between these sums (section VI) and the sums actually paid out, shows the extent to which the expenditures of the government were annually increased by the depreciation of the currency (section VII). The sum of these five amounts gives the total increase of expenditure caused by the issue of the greenbacks. This sum is 849.7 million dollars.

II. THE INCREASE OF REVENUES.

The first section of Table III shows the current receipts of the government during the period under consideration. As with

[1] For example, the loan of 1842 was paid in gold (see Chase's letter to Congress on the subject, *Executive Document No. 27*, p. 2, XXXVII Congress, third session). So also were the demand notes and the 7.30's issued in 1861. On the other hand, the temporary loan and the compound-interest notes were paid in paper currency (see the provisions of the acts of February 25, 1862, § 4, 12 *Statutes at Large*, 345; of March 3, 1863, § 2, 12 *Statutes*, 710; and of June 30, 1864, 13 *Statutes*, 318). For information on this subject I am indebted to the kindness of Professor Charles F. Dunbar.

[2] That the government did purchase some coin appears from the entry among the miscellaneous expenses of 1862 of $9,312.50 "for premium on the purchase of coin." —*Finance Report*, 1862, p. 39.

TABLE III.

INCREASE IN THE CURRENT RECEIPTS OF THE FEDERAL GOVERNMENT, DUE TO THE DEPRECIATION OF THE CURRENCY, 1862 TO 1866.

	Fiscal year 1862 (6 mos.)	Fiscal year 1863	Fiscal year 1864	Fiscal year 1865	Fiscal year 1866 (2 mos.)
I. Current receipts.[1]	Million	Million	Million	Million	Million
From customs	$33.5	$69.1	$102.3	$84.9	$31.3
From sales of public lands	.1	.2	.6	1.0	.1
From direct tax	1.8	1.5	.5	1.2	.0
From miscellaneous sources	.5	3.0	47.5	33.0	12.6
From internal revenue	....	37.6	109.7	209.5	64.4
	35.9	111.4	260.6	329.6	108.4
II. Receipts increased by depreciation.					
From internal revenue	....	37.6	109.7	209.5	64.4
From miscellaneous sources, less premium on sales of gold	.5	3.0	28.2	27.7	11.7
	.5	40.6	137.9	237.2	76.1
III. Average value of $100 of currency in gold	96.9	72.9	64.0	49.5	70.1
IV. Gold value of the receipts increased by depreciation	.5	29.6	88.3	117.4	53.3
V. Increase of receipts through depreciation	.0	11.0	49.6	119.8	22.8
Add receipts from premium on sales of coin[2]	....	....	19.3	5.3	.9
	....	11.0	68.9	125.1	23.7
VI. Total increase of receipts by depreciation	228.7	....	....	....	....

[1] As given by the annual statements of the register of the treasury (see *Finance Reports*, 1862, p. 37; 1863, pp. 34–5; 1864, p. 33; 1865, pp. 44–5; 1866, p. 31). For 1862 the receipts of the last two quarters of the year are given; for 1866 two-thirds of the receipts for the first quarter.

[2] For 1864 see *Executive Document No. 73*, p. 24 (XXXVIII Congress, second session). 2.8 million dollars received as premium on gold sent to London from San Francisco is included. For 1865 see *Executive Document No. 12*, p. xlii (XXXIX Congress, second session). Being unable to find a statement of the premium on sales for the months of July and August 1865, I have assumed that the premium was one-sixth of the amount for the preceding fiscal year.

expenditures, there is reason to consider that the receipts from some sources were increased by the depreciation of the currency and those from other sources were unaffected. To begin with the latter, the revenue derived from the direct tax could have been neither larger nor smaller by reason of the change to a paper basis. This item of receipts was collected under authority of the Act of August 6, 1861, which had imposed a direct tax of 20 million dollars and apportioned it among the states according to their respective populations.[1] This act was passed six months before the suspension of specie payments; the amount to be raised by the tax was fixed by law, and the imposition was not repeated.[2]

Receipts from the sales of public lands were likewise unaffected by depreciation. The effect of the war was to discourage the buying of western lands from the government, and this caused a considerable falling off in the revenue of the land office. The decline in the value of the currency which might be paid for the lands did not suffice to check this tendency.

It has been already stated that customs duties were paid in gold during the war. The receipts from this source were therefore on the same footing as if specie payments had been maintained. All the duties were paid in coin, and the ad valorem duties assessed on the foreign specie valuation of the goods. The change in the value of the dollar in the United States made no difference directly in the customs receipts.

The revenue derived from miscellaneous sources comprises a considerable number of small items. Of these, some were doubtless increased by the depreciation, *e. g.*, the proceeds of sales of captured and abandoned property. Other items, *e. g.*, receipts of fees by American consuls abroad, were unaffected. But one portion of these receipts, viz., the premium on sales of

[1] 12 *Statutes at Large*, 294–296.

[2] The Act of July 1, 1862, § 119 (12 *Statutes at Large*, 489), provided that only one direct tax should be levied until April 1, 1865. The Internal-Revenue Act, approved June 30, 1864, § 173 (13 *Statutes at Large*, 304), declared that no direct tax should be levied until Congress passed a new law requiring it, which Congress did not do.

gold coin made in 1864, 1865, and 1866 should be set down as clear gain. The government imposed customs duties in gold; the coin received from this source exceeded the amount of its coin obligations, and this excess was sold in the gold market for paper money. In making up the estimate, the amount of this premium is subtracted from the miscellaneous receipts, and the remainder is counted as having been increased by the full amount of depreciation, although, as has been pointed out, it contains elements that certainly were not affected by the change in the value of the currency. The amount of the premiums is afterwards added to the increase of revenue.

The last of the enumerated government receipts remains, the internal-revenue duties. This system of taxation was inaugurated by an elaborate law passed July 1, 1862, which imposed certain duties, partly ad valorem, partly specific, upon a great variety of manufactured articles, imposed a tax upon the gross receipts of canals, railroads, theaters, etc., taxed auction and brokers' sales; required licenses for practicing professions, levied an income and a legacy tax, and placed certain taxes upon articles of luxury such as carriages, pianos, and plate.[1] This law was superseded two years later by another internal-revenue act which raised the rates of taxation, and increased the number of articles made to pay duties.[2]

At the time the first law was passed the depreciation of the currency was not great, and probably the rates of taxation imposed do not differ much from what they would have been upon a specie basis. As the depreciation continued, and prices rose, the ad valorem duties, and the taxes on gross receipts and upon incomes were increased in proportion. The specific duties, however, remained what they had been until July 1, 1864, the beginning of the fiscal year 1865. In considering the receipts

[1] 12 *Statutes at Large*, 432–489. The amendments in this act were not in the way of increasing the total revenue derived from it. See Act, July 17, 1862 (12 *Statutes*, 627); Act, March 3, 1863 (12 *Statutes*, 713–731); and Act, March 7, 1864 (13 *Statutes*, 14).

[2] 13 *Statutes at Large*, 223–306. Amended by Act of March 3, 1865 (13 *Statutes*, 469–487).

from internal revenue for the fiscal years 1863 and 1864 it is legitimate to consider the sums received from the former duties as having increased with the depreciation. But the specific duties, including a large portion of the taxes on manufactured articles, receipts from animals slaughtered, from licenses, and the tax on articles of luxury, should not be charged with a rate of increase greater than the depreciation in June 1862, when the act was passed. The Act of July 1, 1864, however, readjusted all the duties to the basis of the depreciated currency; and perhaps it is fair to consider that all the receipts from internal revenue in the succeeding year were increased in proportion to the depreciation.

In these remarks upon the connection between the amount of revenue raised by the government and the decline in the value of the currency, attention has been given only to the direct effects of depreciation. The change to the paper basis, however, was a far-reaching fact whose influence was felt powerfully in all branches of industry. Its indirect effects, though less tangible, and altogether incapable of exact statement, were very potent. It may be well to point out very succinctly some of the ways in which they affected the current receipts of the government.

(1) The depreciation caused prices of all property to rise. This made every man apparently richer than he was. Despite constant warnings that the change was apparent only, the psychological effect upon the people was everywhere evident. Feeling wealthier, they felt more able and more willing to pay heavy taxes.

(2) This same sensation of being richer made the people extravagant. This increased the demand for articles of luxury. Consequently the imports of foreign goods were enlarged, and this increased the receipts of the government from customs revenues.

(3) To offset these influences favorable to the revenue, the depreciation crippled the economic efficiency of some of the most important classes of the community, and therefore lessened their ability to pay taxes. A sudden rise of prices is seldom

uniform; it certainly was not in the United States during the war. All producers, the value of whose products rises less rapidly than the general level of prices, are for the time being made actually poorer by the change. Such seems to have been the condition of the American farmers from 1862 to 1866.[1] Any influence unfavorable to the agricultural class in a country whose interests were so largely agricultural as was the case with the United States in the decade in question must be reflected in the amount of revenue which the government can raise by taxation. Perhaps still more important was the decrease in the real wages of labor. As usually happens in such cases, the rates of money wages lagged behind the advance of prices, and in the interim which was not concluded in 1865 the economic status of laboring men was lowered.[2] Professional men remunerated by fees, of which the amount was fixed largely by custom, were in the same position. To take the salaries of teachers as an example, we find that in 1865 they were receiving in gold between 50 and 60 per cent. of what had been their pay in 1860.[3]

As was said, it is impossible to assign to each of these and other like influences, of which even the mention must, for lack of space, be here omitted, their proper importance, and balance them off against each other. The only course practicable in such a paper as the present is to neglect these reactions entirely. In doing so, however, it is not thought that the result of the estimate is made too favorable. To guard against that danger, the receipts from internal duties are all treated in the estimate as having been increased to the full extent of the depreciation of the currency in which they were paid, although reasons for thinking that this was not the case have been given above.

[1] See the thoroughgoing investigation into the prices of farm products made by Mr. L. G. Powers (*Fifth Biennial Report of the Bureau of Labor of the State of Minnesota*, St. Paul, 1896). Mr. Powers concludes that the financial condition of the farmers is better at present than it was during the war (p. 363).

[2] The statistics of wages in the senate report have been criticised as being too optimistic, yet even these figures show a considerable decline in real wages during the war. Compare the table of currency wages (p. 174) with that of currency prices (p. 91), and note the more rapid rise of the latter.

[3] See table of teachers' salaries in gold, *ibid.*, p. 190.

The estimate made in detail in Table III, after the same fashion as the calculation of the addition to the expenditures of the government caused by depreciation, gives the result that the receipts of the government were increased during the war 228.7 million dollars above what they would have been had the specie standard of values been maintained.

Comparing this 228.7 million increase of receipts with the 849.7 million estimated increase of expenditures, we find that the outgo of the government was inflated by the influence of the depreciated currency 621 million dollars more than its income. This sum then represents, according to the plan of the calculation, the unnecessary addition which the use of a legal-tender paper currency made to the debt incurred during the war.

Before taking the last step in the estimate, a question that naturally suggests itself may be answered. Suppose that the war had been conducted on a specie basis, how would the money raised by the greenbacks have been secured? Supposing the sum to have been borrowed, (1) the interest which the government would have paid would have been larger than was actually the case, for the greenbacks were "a loan without interest," and (2) selling so many more bonds would have lowered the prices of government securities. Should not deduction be made from the estimated increase of the debt to offset these disadvantages of the specie basis?

To this it may be answered that guessing how the 450 million dollars secured by the use of the greenbacks might have been raised had the legal-tender acts not been passed is guessing at what can never be known. It is not necessary, however, to suppose that the whole sum would have been borrowed on interest-bearing bonds. At least a part of the 450 million dollars might have been issued in demand notes convertible into gold. Then the interest charge would have been only upon the gold reserve kept to ensure the instant redemption of the notes. In this case the saving of interest upon the use of notes for which no coin reserve was kept would have been much

less than the increase of interest through the 621 million dollars extra loans which the depreciation of these non-convertible notes made it necessary to borrow. And even on the supposition that the money had all been obtained by loans, the saving of interest by the issue of the greenbacks was only about 21 million dollars in excess of the interest paid on the unnecessary debt created by them.[1]

[1] In the following table a comparison is made between the saving of interest on the greenbacks, and the increase of interest due to the contraction of unnecessary debt. In making it, the assumption has been taken that there is a saving of interest for an average period of six months on the increase of greenbacks put in circulation during any year; and likewise that on the sums borrowed in any one year on account of the depreciation, interest was paid on the whole amount for an average of six months. Therefore in calculating the interest saved, or paid each year, the interest on the whole sum of greenbacks outstanding on the first day of the year, or of the total sum that had been borrowed because of depreciation up to that time, is taken for twelve months, and to this is added six months' interest on the increase of greenbacks or of debt during the year. With the greenbacks is included the amount of fractional currency in circulation, it forming a loan without interest to the government quite as much as the United States notes. The rate of interest taken is 6 per cent.

SAVING OF INTEREST BY THE USE OF PAPER MONEY.

	Fiscal years				
Amount issued in - - -	1862	$ 96.6 m.	at 6 per cent.	(3 mo.) =	$ 1.45 m.
Outstanding commencement of	1863	96.6	6	(12) =	5.80
Amount issued in - - -	1863	221.4	6	(6) =	6.64
Outstanding commencement of	1864	318.0	6	(12) =	19.08
Amount issued in - - -	1864	136.1	6	(6) =	4.08
Outstanding commencement of	1865	454.1	6	(12) =	27.25
Amount issued in - - -	1865	3.6	6	(6) =	.11
Outstanding commencement of	1866	457.7	6	(2) =	4.58
Total - - - - - - - - - -					$68.99 m.

INTEREST PAID ON DEBT INCURRED BECAUSE OF DEPRECIATION OF THE CURRENCY.

Borrowed during - - -	1862	$ 5.3 m.	at 6 per cent.	(3 mo.) =	$ .08 m.
by commencement of	1863	5.3	6	(12) =	.32
during - - -	1863	118.0	6	(6) =	3.54
by commencement of	1864	123.3	6	(12) =	7.40
during - - -	1864	133.4	6	(6) =	4.00
by commencement of	1865	256.7	6	(12) =	15.40
during - - -	1865	361.6	6	(6) =	10.85
by commencement of	1866	618.3	6	(2) =	6.18
during first 2 mos. of	1866	2.5	6	(1) =	.01
Total - - - - - - - - - -					$47.78 m.

As to the lowering of the price of government securities that would have resulted from borrowing 450 million dollars more on bonds, it may be answered, first, that the suspension of specie payments, and the issue of legal-tender paper money,—the ordinary resort of bankrupt governments,—was in itself a great blow to the national credit, and therefore tended strongly to make the terms on which the treasury could borrow less favorable; second, the depreciation in the price of government securities caused by selling 450 million dollars more of bonds would not have been so great as was that caused by borrowing the 621 million dollars extra, for which the greenback policy was responsible. A further sum should be charged against the greenbacks on this score. But since the amount of this item could be determined only by conjecture it will be neglected. However, in order to make ample allowance for the advantage of the "loan without interest," the saving of 21 million dollars will be deducted from the increase of debt. When this is done the greenbacks stand charged with an increase in the cost of the war up to August 31, 1865, amounting to 600 million dollars.

It remains only to consider how the depreciation of the currency, which did not end with the war, affected the later payments of the public debt. It has been seen that the prices which the government had to pay for commodities were raised by the use of the paper dollar as the standard of value. This increase of necessary expenditures compelled the treasury to borrow more dollars in order to purchase the same amount of commodities. But this increase in the expensiveness of the war was, for the time being, nothing but a name. It was due solely to the fact that the purchasing power of the dollar had changed. When the denominator of value grew smaller, in order to express the value of a given amount of commodities it was

According to this estimate the saving of interest up to the moment when the debt reached its maximum was 21.21 million dollars. For the amount of paper currency outstanding at the close of each year see *Statistical Abstract of the United States*, 1878, p. 14. The statement of the debt incurred each year because of the depreciation of the currency is compiled from Tables II and III.

necessary to make the numerator correspondingly larger. What the war really cost the community was the amount of labor and of wealth unproductively consumed in waging it. Depreciation could not change the number of men needed to fill the armies, nor the supplies which the soldiers consumed; it altered only the number of dollars which the government had to pay for these services and commodities.

The depreciation of the currency then made no difference in the amount of the wealth consumed during the war. The only way in which it did make a real increase in its cost came in the repayment of the debt. During the war the government borrowed vast amounts of capital from the community. Under the rise of prices this capital was expressed in, perhaps, twice as many dollars as it would have been on a specie basis. To borrow it, the government promised to pay back some time in the future this number of dollars, increased as it was by the effects of depreciation. The loss of the taxpayers depended on how much wealth the dollar represented when returned to the creditor in the future. As a matter of fact, the dollars paid in redemption of the debt were much more valuable than the dollars borrowed. In 1865 the treasury borrowed, on giving its promise to pay, millions of "dollars" when their average value was less than fifty cents in gold. On maturity these loans were paid back in "dollars" worth 100 cents in gold. The difference between the gold value of 50 cents received and the 100 cents value repaid was not nominal; it was a real increase in the cost of the war to the taxpayers. It was so much more wealth which the people had to take from their pockets and give to the treasury in order to pay the debt incurred by the government.

But not all of the debt was paid in dollars worth 100 cents in gold. A considerable portion was discharged in "lawful money," that is, in paper currency while it was still depreciated. In this case the loss to the people was the difference between the wealth represented by the dollar borrowed and the dollar returned, *i. e.*, rating gold as the standard of value, between the

value of the paper dollar in specie when it was borrowed, and its value in specie at the time it was repaid.

If the war had been conducted on a coin basis, the number of "dollars" owed by the government at its close would have been — to take the figure of our calculation — some 600 millions less than it actually was. But on the specie basis, though the debt would have been less, every dollar of obligation would have been paid in coin. On the paper basis the government was free to pay part of its debt in depreciated paper. By so doing a saving to the taxpayers was effected equal to the difference between a dollar in gold and a paper dollar at the time when this debt was in fact paid off. Evidently this saving is an element that should be taken account of in estimating what the greenbacks cost the taxpayers.

During the war the government negotiated three kinds of loans: (1) loans of which the kind of money in which they should be repaid was not stipulated; (2) loans expressly payable in coin; (3) loans expressly payable in "lawful money." The terms on which the government could borrow were not the same for these different classes of securities. Obligations payable in lawful money never sold on such favorable terms as similar obligations payable in gold. There was always a discount against them in the shape either of a higher rate of interest, or a lower price in the market. Therefore, to raise a given sum of money the government was compelled to obligate itself to pay a larger number of dollars in the principal of the debt, or a higher rate of interest, when it issued securities payable in lawful money than when it issued coin bonds. Thus the use of lawful-money securities increased the amount of debt which was owing at the close of the war above what it would have been had all the obligations been made payable in coin.

The increase of debt from this cause should be included in the indictment against the greenbacks. How great this increase was, however, can only be conjectured. For example, under the Act of March 3, 1865, treasury notes running three years, with interest at 7.30 per cent., payable, principal and interest, in lawful

money, were sold for exactly the same price in the market as were the 6 per cent. bonds, payable not less than and not more than twenty years after date, interest and principal in coin.[1] It is impossible to equate these two sums in such a way as to tell how much less favorable was the bargain which the government made on the paper than on the specie security. We do not know what importance was assigned to the higher rate of interest in paper, what to the shorter time of the treasury notes, nor what to the chance that the bonds might run for full twenty years; and, not knowing these data, we cannot know how much the fact that the notes were payable in currency had to do with the less favorable terms on which they were sold. For this reason no estimate will be made of the amount by which the sale of lawful-money securities increased the debt, although this sum should properly be deducted from the following calculation of the saving effected by using this kind of obligations. This omission tends to make the estimate of the saving too large.

After the war was over and the reduction of the debt had begun, the policy was adopted of paying all loans in coin except when it had been expressly stipulated by the law authorizing them that they should be paid in lawful money.[2] Of such obligations there were outstanding August 31, 1865, when the debt was at its maximum, some 1273.2 millions. As is shown in detail by Table IV, most of these obligations bore a high rate of interest, and ran for but short terms. They were therefore the first part of the debt to be paid. The table shows how rapidly this redemption was effected. Much the greater part of the whole amount had been retired by July 1, 1868. During these years the currency was at a discount of about 30 per cent. Above 1000 millions of debt were paid in dollars depreciated to this extent.

This very rapid redemption of the lawful-money debt was accomplished by a process of refunding. While one obligation

[1] *Report of the Secretary of the Treasury*, 1867, p. lv.

[2] See the Act to Strengthen the Public Credit, approved March 18, 1869 (16 *Statutes at Large*, 1). The United States notes were expressly mentioned and the pledge given to redeem them in "coin or its equivalent."

TABLE IV.

THE COST AT WHICH THE DEBT PAYABLE IN LAWFUL MONEY WAS REDEEMED.

	Aug. 31 1865	July 1 1866	July 1 1867	July 1 1868	July 1 1869	July 1 1870	July 1 1871	July 1 1872	July 1 1879
Loans payable in lawful money.[1]	Million	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.	Mil.
Temporary loan........................	$ 107.1	$ 120.2	$ 20.2	$ 13.8	$ .2	$ .2	$ .1	$ .1	$ .0
One and two-year demand notes of 1863......	34.0	3.5	1.1	.6	.3	.2	.2	.2	.1
Certificates of indebtedness................	85.1	26.4	.0	.0	.0	.0	.0	.0	.0
Compound-interest notes	217.0	159.0	122.4	28.2	2.9	2.2	.8	.6	.3
7.30 three-year treasury notes	830.0	806.3	488.6	37.7	1.2	.6	.5	.3	.1
Fractional and postal currency	26.3	27.1	28.3	32.6	32.1	39.9	40.6	40.9	15.8
Total indebtedness payable in lawful money	1299.5	1142.5	660.6	112.9	36.7	43.1	42.2	42.1	16.3
Reduction of the debt payable in lawful money[2]...		157.0	481.9	547.7	76.2	6.4	.9	.1	25.8
Net reduction of the public debt[3]...............		62.5	95.1	66.4	23.2				
Average value of $100 of currency in gold[4]........		71.7	70.9	71.5	72.7	81.1	88.7	89.4	91.9
Gold value of currency paid in redemption of debt		44.8	67.4	47.5	16.9	5.2	.8	.09	23.7
Saving to government by redeeming debt in paper money instead of in gold[5]............		17.7	27.7	18.9	6.3	1.2	.1	.01	2.1

Total saving... 71.6 millions.

NOTES TO TABLE IV.

[1] Compiled from the annual statements of the public debt made by the register of the treasury. For 1865 see *Executive Document No. 81*, p. 2 (XL Congress, second session); for the following years see the *Finance Reports*, 1866, pp. 38–43; 1867, pp. l–lv; 1868, pp. lii–lix; 1869, pp. xxii–xxix; 1870, pp. xxxv–xlv; 1871, pp. 26–37; 1872, pp. 29–38; 1879, pp. 25–36.

[2] It will be noticed that in 1870, instead of being a reduction in the lawful money debt there was an increase, caused by new issues of fractional currency.

[3] August 31, 1865, the principal of the public debt was 2,845.9 million dollars (*Report of the Secretary of the Treasury*, 1866, p. 6); June 30, 1866, it was 2,783.4 million dollars (*ibid.*, p. 4). The decrease is 62.5 million dollars. For the three succeeding years the reduction is taken from a table in the *Finance Report*, 1871, p. 11.

[4] From the treasury table: *Finance, Commerce and Immigration of the United States*, No. 4, Series 1895–6, p. 518.

[5] Obtained by subtracting the gold value of the currency paid from the nominal value. As explained in the text, the calculation is based on the net reduction of the debt for 1866–1869; thereafter on the amount of the currency debt redeemed. To avoid making the table too cumbrous I have omitted the years 1872–1879, when but little change in the amount of the currency debt was made except in the item of fractional currency. For 1870, when the debt was increased, the difference between the par value and the currency value of the increase represents a loss to the government.

was paid off, a new debt in part took its place. Thus the net reduction of the debt was a much slower process than one would think from looking merely at the rapid redemption of the currency obligations. In 1868 nearly 550 millions of these debts were paid; but new obligations were created to such an extent that at the end of the year the principal of the public debt was but 66.4 millions less than it had been at the beginning. The 547.7 millions of currency obligations were all paid and paid in paper money; but this paper was obtained only by issuing 483.3 millions of new obligations, and since these new debts were all payable in coin, it is only on the balance of 66.4 millions that the government made a saving by paying in depreciated currency.

The table shows in detail the calculation of this saving, proceeding on the principle just explained that where the redemption of lawful-money obligations exceeded the net reduction of the debt, a saving was really made only on this latter sum. The conclusion of the estimate is that it required some 71.6 millions

less of wealth to redeem the lawful-money obligations than would have been required had they been paid in specie.

One estimate has shown that the use of the greenback currency made a needless addition to the public debt of the country at the close of the war amounting to 600 millions of "dollars." The last estimate has led to the conclusion that by paying a certain portion of the debt in "dollars" made of paper, the government saved in wealth to the taxpayers 71.6 millions of gold dollars. The difference between this saving and the addition to the public debt gives the real amount of wealth measured in gold dollars which the paper-money plan of finance cost the country. This amount is 528.4 millions.[1]

The first legal-tender act had a fiscal purpose. Financial affairs had been allowed to drift into a crisis. To relieve the treasury the government sought to utilize its prerogative of determining upon a standard of value and of coining money, for its own financial advantage. To attain this end, the interest which the community has in the maintenance of a standard free from sudden and violent fluctuations was openly sacrificed. That the people suffered is not surprising. But it seems equally true, unless the conclusions of this paper are wholly wrong, that the treasury suffered likewise. Instead of profiting by the attempt to use the medium of exchange as a financial engine, the government, because of this attempt, incurred a vastly greater debt which must eventually be paid by the people.

There is another financial result of the issue of the greenbacks that merits attention. In making the estimate of the increase of government expenditures it was seen that some of

[1] Perhaps it is unnecessary to enter a caution against accepting this conclusion as literally exact. Several items have been mentioned that should be taken account of but have not been because of the difficulty of reducing them to exact sums. It is, however, thought that the half a billion is rather too small than too large for an estimate of what the greenbacks cost. Since the estimate stops with the close of the war and the redemption of the legal-tender debt, no account is taken of the loss to the people by paying interest since the war on the unnecessary debt created.

the items of expense were affected by the depreciation of the currency, and that some were not. In the first case, as has been shown at length, the loss caused by the depreciation had ultimately to be borne by the taxpayers. In the second case the loss fell directly upon the creditors of the government. In closing it will be well to consider who these creditors were, and how much they suffered from the lessened purchasing power of the money in which they were paid.

The expenditures which were increased by the depreciation consisted mainly of payments for commodities. The price which the government paid for supplies was fixed by agreement between its officials and the owner. As the value of the dollars in which he would be paid declined, the owner raised the price of his goods. In this way he shifted the loss of the depreciation from his own shoulders upon the treasury, which ultimately took it from the people in the shape of heavier taxes.

The expenditures not affected by depreciation were those which were fixed in amount by law, and therefore could not be altered except by a change in the law. The most important class of cases under this head was the pay for labor, as under the other head it was pay for commodities. Congress could not well declare, and never had declared, how many dollars the navy department might pay apiece for pea jackets, nor how many cents the war department might pay a pound for fresh beef; but it had stipulated exactly what number of nominal dollars should be paid to the officials of these departments, even down to the lowest class of clerks. Consequently, when the value of the currency in which these salaries were paid declined, these creditors of the government could not raise the price of their labor, nor could the treasurer pay them more, without authority of an act of Congress. The number of dollars which they received was but the same when the purchasing power of a dollar had fallen one-half as it had been when the salary was paid in specie. The rise of prices was a loss to them; a loss which they could not shift to the treasury, but had to bear as best they might, or leave the service of the government.

This loss was felt alike by all the officials of the government. To those occupying high offices the inconvenience was not slight. Even for such positions the salaries paid by the United States had always been small, and when their purchasing power was decreased by one-half the result was uncomfortable. But the loss must have been more severely felt by those in places where the pay was small and where honor constituted no part of the return. The great increase of administrative business due to the war had necessitated large additions to the force of employees in the different departments. As prices rose the cost of living became very expensive. Clerks whose salaries had before enabled them to make some savings, now found that their expenses were outrunning their incomes. That many of these men suffered in consequence there can be no doubt. There was one way of escape, but a way that was embarrassing to the administration. Although government employees had received no increase of pay, the return to clerks employed by private persons had increased. The result was that the competent and experienced clerks, who could no longer live on their salaries, were forced to leave the government employ and to accept positions in business houses. Their places could be filled on the existing scale of pay only by employing less competent men, much to the detriment of the government's interests. The reports of heads of departments and of bureaus for 1864 and 1865 are full of such complaints and urgent requests to Congress to sanction an increase of the pay of their assistants.[1] The depreciation of the currency was thus a cause of considerable inconvenience, and even financial loss, to the government in disorganizing the public service when the need of efficiency was the greatest; and a cause of suffering to those clerks who remained in the government employ.

[1] For examples see *Report of the Secretary of the Navy*, 1864, p. xlii, 1866, p. 37; Secretary of the Treasury, 1865, p. 42; Comptroller of the Currency, 1864, p. 55 of *Finance Report*; Treasurer, *ibid.*, p. 76, and *Finance Report*, 1865, p. 98; Second Auditor of the Treasury in *Finance Report*, 1864, p. 99, and for 1865, p. 127; Fourth Auditor, *Report*, 1864, p. 110; Commissioner of Internal Revenue, *Report*, 1865, p. 92.

But there was another and a larger class of men in the service of the government whose case was perhaps even more unfortunate, the sailors aud the soldiers.

At the outbreak of the Civil War the pay of privates in the army was what it had been since 1854, eleven dollars per month.[1] One of the first of the war measures, enacted in August 1861, increased this pay to thirteen dollars a month.[2] In 1862, with the suspension and the issue of inconvertible paper money, the depreciation commenced. As it proceeded the purchasing power of the soldiers' pay steadily declined. From thirteen dollars in 1861 its value declined until it would purchase less commodities than would ten dollars in specie by the end of 1862. In 1863 it was less than nine dollars for the first six months; but the series of great victories in July, Gettysburg, the surrender of Vicksburg, and Port Royal, improved the credit of the government and increased the value of its notes. Accordingly the value of the soldiers' pay appreciated until it reached ten and one-third dollars in August. Another relapse followed and by December it was but eight and one-half dollars. The next year, 1864, the fall continued. By April it had gone so far as to reduce the specie value of the pay to seven and one-half dollars. At this stage of affairs the distress of the army had become such that Congress undertook to alleviate it. Rejecting a proposition to pay the thirteen dollars a month in gold, or in an amount of paper equivalent at the market rate to thirteen dollars in gold,[3] it added three dollars to the pay. This raised the stipend to sixteen dollars per month in greenbacks.[4]

This increase took effect May 1, 1864. The immediate result was to increase the specie value of the pay for that month

[1] This was the pay as fixed by the act approved August 4, 1854.—10 *Statutes at Large*, 575.

[2] Act approved August 6, 1861.— 12 *Statutes at Large*, 326.

[3] This proposition was made by Senator Powell of Kentucky.—*Congressional Globe*, XXXVIII Congress, first session, p. 2306.

[4] Act approved June 20, 1864 (13 *Statutes at Large*, 144). This took effect from May 1, 1864. Privates in the cavalry, artillery, and infantry were all included.

TABLE V.

TABLE SHOWING THE VARIATIONS IN THE SPECIE VALUE OF A SOLDIER'S MONTHLY PAY; JULY 1861 TO DECEMBER 1865.

	1861			1862			1863			1864			1865		
	Monthly pay	Specie value of \$1 cur.	Specie value of soldier's pay	Monthly pay	Specie value of \$1 cur.	Specie value of soldier's pay	Monthly pay	Specie value of \$1 cur.	Specie value of soldier's pay	Monthly pay	Specie value of \$1 cur.	Specie value of soldier's pay	Monthly pay	Specie value of \$1 cur.	Specie value of soldier's pay
January..........	....	....	....	\$13	\$ .976	\$12.69	\$13	\$ .689	\$8.96	\$13	\$ .643	\$8.36	\$16	\$ .463	\$7.41
February.........	....	....	....	13	.966	12.56	13	.623	8.10	13	.631	8.20	16	.487	7.79
March...........	....	....	....	13	.982	12.77	13	.647	8.41	13	.614	7.98	16	.575	9.20
April...........	....	....	....	13	.985	12.81	13	.66	8.58	13	.579	7.53	16	.673	10.77
May.............	....	....	....	13	.968	12.58	13	.672	8.74	16	.567	9.07	16	.737	11.79
June............	....	....	....	13	.939	12.21	13	.692	9.00	16	.475	7.60	16	.714	11.42
July.............	\$11	\$1	\$11	13	.866	11.26	13	.766	9.96	16	.387	6.19	16	.704	11.26
August...........	13	1	13	13	.873	11.35	13	.795	10.34	16	.394	6.30	16	.697	11.15
September........	13	1	13	13	.844	10.97	13	.745	9.69	16	.449	7.18	16	.695	11.12
October..........	13	1	13	13	.778	10.11	13	.677	8.80	16	.483	7.73	16	.687	10.99
November........	13	1	13	13	.763	9.92	13	.676	8.79	16	.428	6.85	16	.68	10.88
December........	13	1	13	13	.756	9.83	13	.662	8.61	16	.440	7.04	16	.684	10.94

to nine dollars. But unfortunately during the next two months the depreciation of the greenbacks was more rapid than ever before. So great was the fall that the nominal increase was more than offset, and the specie value of the pay reduced to its lowest point. For the month of July sixteen dollars in paper was worth but $6.19 in specie, less than one-half what the pay had been at the lower rate before the issue of the greenbacks.

After this matters began to mend, at first slowly, then more rapidly. By the end of the year the pay was worth about seven dollars. The following spring brought the surrender of Lee and the collapse of the confederacy. These events exercised a powerful upward influence upon the value of the greenbacks. By May sixteen dollars was equivalent to $11.80 in specie. But after that there was another, though not a great, decline. During the summer, when a large part of the army was paid off and mustered out of service, the value of a month's wages averaged about eleven dollars.

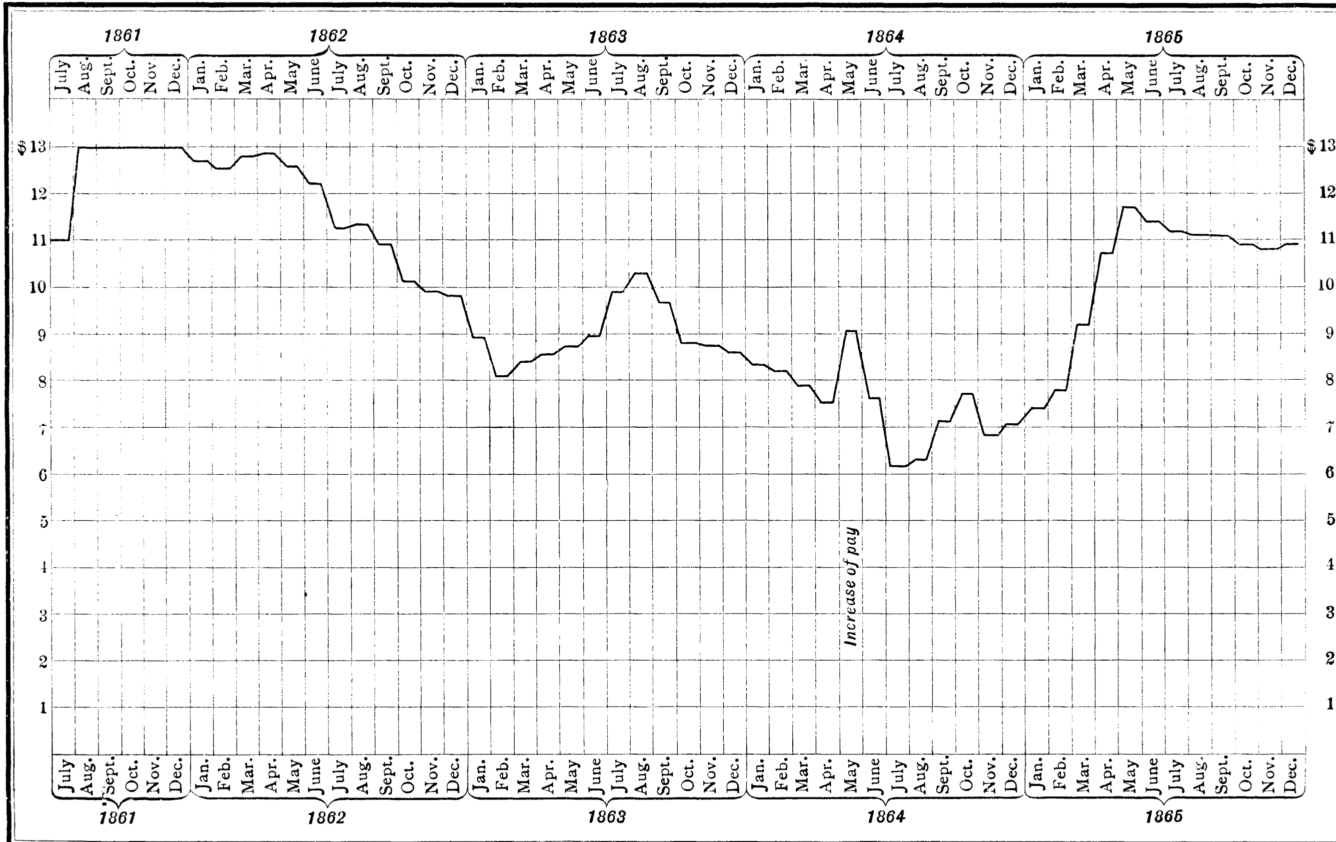
These fluctuations in the value of the pay of the soldiers are more exactly shown in the preceding table, which exhibits the equivalent in specie of the wages paid to the privates of the army by months, from July 1861 to the close of 1865.[1] The accompanying chart gives a graphic representation of the decline of the specie value of the pay.[2]

[1] It should be remembered in considering this table that the decline in the value of the monthly pay of a soldier was in part offset by the system of bounties to which both the federal and the state governments had recourse to stimulate volunteering when the first enthusiasm had cooled. But the increase was not so great as might be thought, because the system was inaugurated on a lavish scale before the country cut loose from the specie standard. An act approved July 22, 1861, provided that volunteers honorably discharged after two years' service should receive a bounty of $100.—§ 5, 12 *Statutes at Large*, p. 270.

[2] The specie values of a paper dollar are taken from the table published by the bureau of statistics in *Finance, Commerce, and Immigration of the United States*, No. 4, Series 1895–6, p. 518.

If it be thought that the use of the specie value of paper money exaggerates the decline in the purchasing power of the pay of the army another method of comparison may be employed. The generally received table of prices — that compiled under the direction of Dr. R. P. Falkner and published in the "Aldrich Report"—gives the

CHART SHOWING THE SPECIE VALUE OF A SOLDIER'S MONTHLY PAY, JULY 1861 TO DECEMBER 1865.



Perhaps this decline in the amount of commodities which the soldiers could buy with their pay was the most regrettable result of the issue of the greenbacks. The addition of hundreds of

prices for but one month in the year, namely, January. Obviously this would be of little use for the present purpose when prices were changing so rapidly and so violently as during the war. But from data supplied in the report, though not used by Professor Falkner in making up the yearly index numbers, a quarterly table of prices has been compiled and published in this journal. (See S. McLean Hardy, "Quantity of Money and Prices," Journal of Political Economy, vol. iii. p. 145. This table extended only to January 1865. It has been carried further by Miss K. C. Felton, to whose kindness I am indebted for the use of the quotations for April, July, and October 1865.) For the sake of comparison and confirmation of the result shown by the table in the text a computation of the purchasing power of a soldier's monthly pay over commodities, based upon this table of quarterly prices, is here presented.

TABLE VI.

TABLE SHOWING THE VARIATIONS IN THE PURCHASING POWER OF A SOLDIER'S MONTHLY PAY OVER COMMODITIES.

	Relative prices	Average monthly pay of private for the quarter	Purchasing power of monthly pay over commodities	Specie value of the pay
1860—January	100	..	.....	.....
1861—July	95	$12⅓	$12.98	$11
October	125	13	10.40	13
1862—January	113	13	11.50	12.69
April	112	13	11.61	12.81
July	117	13	11.11	11.26
October	131	13	9.92	10.11
1863—January	145	13	8.81	8.96
April	165	13	7.88	8.58
July	161	13	8.07	9.96
October	161	13	8.07	8.80
1864—January	188	13	6.91	8.36
April	199	15	7.54	7.53
July	250	16	6.40	6.19
October	252	16	6.39	7.73
1865—January	261	16	6.13	7.41
April	208	16	7.69	10.77
July	193	16	8.29	11.26
October	214	16	7.47	10.99

It will be observed that the use of the commodity standard shows the purchasing power of the pay to be less than does the specie value of the currency. However, as was suggested above, a part of this rise of prices would probably have occurred during the war even on a specie basis.

millions to the public debt was a more dramatic outworking of the policy, and one that has attracted more attention. But it is probable that those who suffered most keenly from the depreciation of the currency were the soldiers on the field of battle, and their families at home, who were dependent for their support, in whole or in part, upon what thirteen dollars a month would buy.

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